

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Cancelled).
2. (Cancelled).
3. (Currently Amended) The An isolated antibody reactive with an immunogenic of claim 2, wherein the peptide selected from the group consisting of has the sequence KTWGQYWQV (SEQ ID NO: 46), KTWGQYWQVL (SEQ ID NO: 47), ITDQVPFSV (SEQ ID NO: 48), and TITDQVPFSV (SEQ ID NO: 49), LLDGTATLRL (SEQ ID NO: 33), VLYRYGSFSV (SEQ ID NO: 34), VLKRCLLHL (SEQ ID NO: 36), ALDGGNKHFL (SEQ ID NO: 35), VLPSPACQLV (SEQ ID NO: 37), YLEPGPVTA (SEQ ID NO: 40), SLADTNSLAV (SEQ ID NO: 38), SVSVSQLRA (SEQ ID NO: 39), and LNVSLADTN (SEQ ID NO: 41).
4. (Cancelled).
5. (Currently Amended) The An isolated antibody reactive with an immunogenic peptide of claim 2, wherein the peptide is selected from a group consisting of KTWGQYWQV (SEQ ID NO: 46) with at least one amino acid modification in SEQ ID NO: 46, KTWGQYWQVL (SEQ ID NO: 47) with at least one amino acid modification in SEQ ID NO: 47, ITDQVPFSV (SEQ ID NO: 48) with at least one amino acid modification in SEQ ID NO: 48, TITDQVPFSV (SEQ ID NO: 49) with at least one amino acid modification in SEQ ID NO: 49, LLDGTATLRL (SEQ ID NO: 33) with at least one amino acid modification in SEQ ID NO: 33, VLYRYGSFSV (SEQ ID NO: 34) with at least one amino acid modification in SEQ ID NO: 34, VLKRCLLHL (SEQ ID NO: 36) with at least one amino acid modification in SEQ ID NO: 36, ALDGGNKHFL (SEQ ID NO: 35) with at least one amino acid modification in SEQ ID NO: 35, VLPSPACQLV (SEQ ID NO: 37) with at least one amino acid modification in SEQ ID NO: 37, YLEPGPVTA (SEQ ID NO: 40) with at least one

amino acid modification in SEQ ID NO: 40, SLADTNSLAV (SEQ ID NO: 38) with at least one amino acid modification in SEQ ID NO: 38, SVSVSQLRA (SEQ ID NO: 39) with at least one amino acid modification in SEQ ID NO: 39, and LNVSLADTN (SEQ ID NO: 41) with at least one amino acid modification in SEQ ID NO: 41 contains at least one amino acid modification of said gp100 sequence.

6. (Currently Amended) The isolated antibody of claim 5, wherein the modification ~~includes at least one~~ is an amino acid substitution in said peptide sequence.

7. (Currently Amended) The isolated antibody of claim 6, wherein said amino acid substitution is located at a position selected from the group consisting of: (i) the first position, (ii) the second position, (iii) the third position, (iv) the ninth position, (v) the tenth position, and (vi) a combination of at least two of (i)-(v) in the sequence of the peptide.

8. – 13. (Cancelled).

14. (Currently Amended) The isolated antibody of claim 3 ~~4~~, wherein the peptide is a native, synthetic or recombinantly produced peptide.

15. (Currently Amended) The isolated antibody of claim 3 ~~4~~, wherein the antibody is a monoclonal antibody.

16. (Currently Amended) ~~An~~ The isolated antibody of claim 7, wherein ~~said that is reactive with an immunogenic peptide is having a formula~~ selected from the group consisting of $X_1X_2X_3GQYWQX_4$, $X_1X_2X_3QVPFSX_4$ and $X_1X_2X_3PGPVTX_4$, wherein:

X_1 is any amino acid;

X_2 is any hydrophobic aliphatic amino acid;

X_3 is any amino acid; and

X_4 is a hydrophobic aliphatic amino acid.

17. (Currently Amended) The isolated antibody of claim 16, wherein X_1 is selected from the group consisting of methionine, leucine, alanine, glycine, threonine, isoleucine, valine, tyrosine, serine, tryptophan, phenylalanine, lysine and aspartic acid.
18. (Currently Amended) The isolated antibody of claim 16, wherein X_2 is selected from the group consisting of methionine, leucine, alanine, glycine, isoleucine, valine and threonine.
19. (Currently Amended) The isolated antibody of claim 16, wherein X_3 is selected from the group consisting of methionine, leucine, alanine, glycine, threonine, isoleucine, tyrosine, valine, tryptophan, phenylalanine, serine, lysine and aspartic acid.
20. (Currently Amended) The isolated antibody of claim 16, wherein X_4 is selected from the group consisting of methionine, leucine, alanine, glycine, isoleucine, valine and threonine.
21. (Currently Amended) The isolated antibody of claim 16, wherein the immunogenic peptide is selected from the group consisting of KTWGQYWQV (SEQ ID NO: 46), KLWGQYWQV (SEQ ID NO: 68), KMQGQYWQV ~~Km-WGQYWQV~~ (SEQ ID NO: 69), KIWGQYWQV (SEQ ID NO: 70), WTWGQYWQV (SEQ ID NO: 71), FTWGQYWQV (SEQ ID NO: 72), YTWGQYWQV (SEQ ID NO: 73), ATWGQYWQV (SEQ ID NO: 74), LTWGQYWQV (SEQ ID NO: 75), KTYGQYWQV (SEQ ID NO: 76), KTFGQYWQV (SEQ ID NO: 77), ALWGQYWQV (SEQ ID NO: 78), LLWGQYWQV (SEQ ID NO: 79), WLWGQYWQV (SEQ ID NO: 80), FLWGQYWQV (SEQ ID NO: 81), and YLWGQYWQV (SEQ ID NO: 82).
22. (Currently Amended) The isolated antibody of claim 16, wherein the immunogenic peptide is selected from the group consisting of ITDQVPFSV (SEQ ID NO: 48), ILDQVPFSV (SEQ ID NO: 83), IMDQVPFSV (SEQ ID NO: 84), IIDQVPFSV (SEQ ID NO: 85), FTDQVPFSV (SEQ ID NO: 86), WTDQVPFSV (SEQ ID NO: 87), YTDQVPFSV (SEQ ID NO: 88), ITWQVPFSV (SEQ ID NO: 89), ITFQVPFSV (SEQ ID NO: 90), ITYQVPFSV (SEQ ID NO: 91), ITAQVPFSV (SEQ ID NO: 92), ITMQVPFSV (SEQ ID NO: 93), ITSQVPFSV

(SEQ ID NO: 94), ILWQVPFSV (SEQ ID NO: 95), ILFQVPFSV (SEQ ID NO: 96), ILYQVPFSV (SEQ ID NO: 97), ILAQVPFSV (SEQ ID NO: 98), ILMQVPFSV (SEQ ID NO: 99), ILSQVPFSV (SEQ ID NO: 100), WLDQVPFSV (SEQ ID NO: 101), FLDQVPFSV (SEQ ID NO: 102), and YLDQVPFSV (SEQ ID NO: 103).

23. (Currently Amended) The isolated antibody of claim 16, wherein the immunogenic peptide is selected from the group consisting of YLEPGPVTA (SEQ ID NO. 40), YLEPGPVTV ~~YLEPGPVTV~~0 (SEQ ID NO:104), YLEPGPVTL (SEQ ID NO:105), YLEPGPVTI (SEQ ID NO:106), FLEPGPVTA (SEQ ID NO:107), WLEPGPVTA (SEQ ID NO:108), YLYPGPVTA (SEQ ID NO:109), YLWPGPVTA (SEQ ID NO:110), YLFPGPVTA (SEQ ID NO:111), YLMPGPVTA (SEQ ID NO:112), YLSPGPVTA (SEQ ID NO:113), YLAPGPVTA (SEQ ID NO:114), YLMPGPVTV (SEQ ID NO:115), YLSPGPVTV (SEQ ID NO:116), YLAPGPVTV (SEQ ID NO:117), YLYPGPVTV (SEQ ID NO:118), YLFPGPVTV (SEQ ID NO:119), and YLWPGPVTV (SEQ ID NO:120).

24. (Currently Amended) The isolated antibody of claim 16, wherein the immunogenic peptide is a native, synthetic or recombinantly produced peptide.

25. (Currently Amended) The isolated antibody of claim 16, wherein the antibody is a monoclonal antibody.